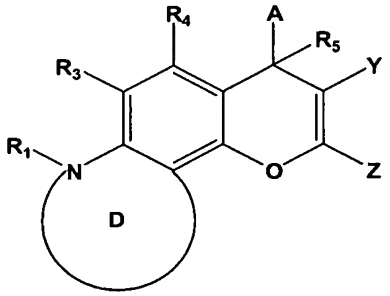
Amendments to the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) A compound of formula I:



(I)

wherein,

R_1 is methyl, hydroxymethyl, or an ester of said hydroxymethyl ~~selected from the group consisting of alkyl, cycloalkyl, cycloalkylalkyl, hydroxyalkyl, haloalkyl, alkoxyalkyl, aminoalkyl and oxiranylalkyl~~;

R_3 and R_4 are independently hydrogen, halo, haloalkyl, aryl, fused aryl, carbocyclic, a heterocyclic group, a heteroaryl group, C_{1-10} alkyl, alkenyl, alkynyl, arylalkyl, arylalkenyl, arylalkynyl, heteroarylalkyl, heteroarylalkenyl, heteroarylalkynyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, aminoalkyl, carboxyalkyl, nitro, amino, cyano, acylamido, hydroxy, thiol, acyloxy, azido, alkoxy, carboxy, methylenedioxy, carbonylamido or alkylthiol;

R_5 is hydrogen or C_{1-10} alkyl;

A is optionally substituted and is aryl, heteroaryl, saturated carbocyclic, partially saturated carbocyclic, saturated heterocyclic, partially saturated heterocyclic or arylalkyl;

D together with the rings to which it is fused is 4*H*-pyrrolo[2,3-*h*]chromene ~~is optionally substituted and is a heteroaromatic, partially saturated heterocyclic or~~

~~saturated heterocyclic fused ring, wherein said fused ring has 5 or 6 ring atoms, wherein one or two of said ring atoms are nitrogen atoms and the others of said ring atoms are carbon atoms~~;

Y is CN, COR_{19}, CO_2R_{19} or $CONR_{20}R_{21}$, wherein R_{19}, R_{20} and R_{21} are independently hydrogen, C_{1-10} alkyl, haloalkyl, aryl, fused aryl, carbocyclic, a heterocyclic group, a heteroaryl group, alkenyl, alkynyl, arylalkyl, arylalkenyl, arylalkynyl, heteroarylalkyl, heteroarylalkenyl, heteroarylalkynyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl or aminoalkyl; or

R_{20} and R_{21} are taken together with the nitrogen to form a heterocycle; and

Z is $NR_{22}R_{23}$, $NHCOR_{22}N(COR_{23})_2$, $N(COR_{22})(COR_{23})$, $N{=}CHOR_{19}$ or $N{=}CHR_{19}$ wherein R_{22} and R_{23} are independently H, C_{1-4} alkyl or aryl, or R_{22} and R_{23} are combined together with the group attached to them to form a heterocycle;

or a pharmaceutically acceptable salt or prodrug thereof.

2. (cancelled)

3. (cancelled)

4. (original) The compound of claim 1, wherein each of R_3-R_5 is hydrogen.

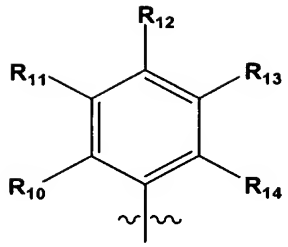
5. (original) The compound of claim 1, wherein Y is cyano.

6. (original) The compound of claim 1, wherein Z is $NR_{22}R_{23}$.

7. (original) The compound of claim 6, wherein Z is NH_2.

8. (original) The compound of claim 1, wherein A is optionally substituted and selected from the group consisting of phenyl, pyridinyl, pyrazinyl, quinoxalinyl, indolyl and thiophenyl.

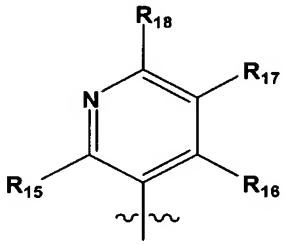
9. (previously presented) The compound of claim 8 wherein A is



and R_{10}-R_{14} are independently hydrogen, halo, haloalkyl, aryl, fused aryl, carbocyclic, a heterocyclic group, a heteroaryl group, C_{1-10} alkyl, alkenyl, alkynyl, arylalkyl, arylalkenyl, arylalkynyl, heteroarylalkyl, heteroarylalkenyl, heteroarylalkynyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, aminoalkyl, carboxyalkyl, nitro, amino, cyano, acylamido, hydroxy, thiol, acyloxy, azido, alkoxy, carboxy, methylenedioxy, ethylenedioxy, carbonylamido or alkylthiol; or

R_{10} and R_{11}, or R_{11} and R_{12}, taken together with the atoms to which they are attached form an aryl, heteroaryl, partially saturated carbocyclic, saturated carbocyclic, partially saturated heterocyclic or saturated heterocyclic group, wherein said group is optionally substituted.

10. (original) The compound of claim 8, wherein A is



wherein,

R_{15}-R_{18} are independently hydrogen, halo, haloalkyl, aryl, fused aryl, carbocyclic, a heterocyclic group, a heteroaryl group, C_{1-10} alkyl, alkenyl, alkynyl, arylalkyl, arylalkenyl, arylalkynyl, heteroarylalkyl, heteroarylalkenyl, heteroarylalkynyl,

carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, aminoalkyl, carboxyalkyl, nitro, amino, cyano, acylamido, hydroxy, thiol, acyloxy, azido, alkoxy, carboxy, methylenedioxy, ethylenedioxy, carbonylamido or alkylthiol; or

R_{16} and R_{17}, or R_{17} and R_{18}, taken together with the atoms to which they are attached form an aryl, heteroaryl, partially saturated carbocyclic, saturated carbocyclic, partially saturated heterocyclic or saturated heterocyclic group, wherein said group is optionally substituted.

11.-19. (canceled)

20. (currently amended) The compound of claim [[13]] 1, selected from the group consisting of:

2-Amino-3-cyano-7-methyl-4-(6-methyl-pyrazin-2-yl)-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-7-methyl-4-(quinoxalin-2-yl)-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(indol-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene; and

2-Amino-4-(5-nitro-thiophene-2-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

or a pharmaceutically acceptable salt or prodrug thereof.

21. (canceled)

22. (Currently amended) The compound of claim [[21]] 9, wherein:

R_1 is methyl, hydroxymethyl or an ester of said hydroxymethyl ~~selected from the group consisting of alkyl, cycloalkylalkyl, hydroxyalkyl, haloalkyl, alkoxyalkyl, aminoalkyl and oxiranylalkyl~~;

each of R_3, R_4, R_6 and R_7 is hydrogen or methyl;

each of R_{10}-R_{14} is independently selected from the group ~~consistng~~ consisting of hydrogen, hydroxy, halogen, cyano, alkoxy and acetoxy or combines with another of R_{10}-R_{14} to form methylenedioxy or ethylenedioxy;

Y is cyano; and

Z is $NR_{22}R_{23}$, wherein R_{22} and R_{23} are independently H or C_{1-4} alkyl.

23. (Currently amended) The compound of claim 22, wherein said compound is selected from the group consisting of:

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-ethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-cyclopropylmethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-(2-diethylamino-ethyl)-4*H*-pyrrolo[2,3-*h*]chromene;~~

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4-hydroxy-5-methoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-oxiranylmethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

2-Amino-4-(4-acetoxy-3-bromo-5-methoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4,5-trimethoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-nitrophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dimethoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4-methylenedioxo-5-methoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-methoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-bromophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-difluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(4,5-dimethoxy-3-iodophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-~~Amaino~~Amino-3-cyano-4-(3-cyanophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4,5-trimethoxyphenyl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dimethoxyphenyl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

4,7,10,13,16,19-Docosahexaenoic acid {2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-4*H*-pyrrolo[2,3-*h*]chromene}-7-ylmethyl ester;

2-Amino-3-cyano-4-(3-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(4-cyanophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-chlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dichlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4-dichlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-3-cyano-4-(3-bromo-4,5-dimethoxyphenyl)-7,9-dimethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

2-Amino-3-cyano-4-(3,4-difluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-fluoro-4-chlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-bromo-4-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene; and

2-Amino-3-cyano-4-(3-cyano-4-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-3-cyano-4-(3,5-dichloro-phenyl)-7-isopropyl-4*H*-pyrrolo[2,3-*h*]chromene; and~~

~~2-Amino-3-cyano-4-(3-bromo-4,5-dimethoxy-phenyl)-7-isopropyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

or a pharmaceutically acceptable salt or prodrug thereof.

24. (canceled)

25. (Currently amended) The compound of claim [[24]] 10, wherein:

R_1 is methyl, hydroxymethyl or an ester of said hydroxymethyl ~~selected from the group consisting of alkyl, cycloalkylalkyl, hydroxyalkyl, haloalkyl, alkoxyalkyl, aminoalkyl and oxiranylalkyl~~;

each of R_3, R_4, R_6 and R_7 is independently hydrogen or methyl;

each of R_{15}-R_{18} is independently selected from the group consisting of hydrogen, hydroxy, halogen, cyano, alkoxy and acetoxy or combines with another of R_{16}-R_{18} to form methylenedioxy or ethylenedioxy;

Y is cyano; and

Z is $NR_{22}R_{23}$, wherein R_{22} and R_{23} are independently H or $C_{1\text{-}4}$ alkyl.

26. (original) The compound of claim 25, wherein said compound is selected from the group consisting of:

2-Amino-4-(5-cyano-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-chloro-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-chloro-6-hydroxy-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-bromo-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-bromo-pyridin-3-yl)-3-cyano-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(5-methoxy-pyridin-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene; and

4,7,10,13,16,19-Docosahexaenoic acid {2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl) -4*H*-pyrrolo[2,3-*h*]chromene}-7-ylmethyl ester;

or a pharmaceutically acceptable salt or prodrug thereof.

27.-53. (canceled)

54. (original) A pharmaceutical composition comprising the compound of claim 1, or a pharmaceutically acceptable salt or prodrug thereof, and a pharmaceutically acceptable excipient or carrier.

55.-56. (canceled)

57. (original) The pharmaceutical composition of claim 54, wherein said excipient or carrier is selected from the group consisting of saccharides, starch pastes, gelatin, tragacanth, cellulose preparations, calcium phosphates and polyvinyl pyrrolidone.

58. (previously presented) The pharmaceutical composition of claim 57, wherein said excipient or carrier is a saccharide selected from the group consisting of lactose, sucrose, mannitol and sorbitol.

59. (original) The pharmaceutical composition of claim 54, wherein said excipient or carrier is a lipophilic solvent.

60. (original) The pharmaceutical composition of claim 59, wherein said lipophilic solvent is selected from the group consisting of fatty oils, fatty acid esters, polyethylene glycols and paraffin hydrocarbons.

61. (original) The pharmaceutical composition of claim 59, wherein said lipophilic solvent is selected from the group consisting of sesame oil, ethyl oleate, triglycerides, polyethylene glycol-400, cremophor and cyclodextrins.

62. (original) The pharmaceutical composition of claim 54, wherein said excipient or carrier is selected from the group consisting of vegetable oils, mineral oils, white petrolatum, branched chain fats, branched chain oils, animal fats and high molecular weight alcohol (greater than C_{12}).

63. (original) The pharmaceutical composition of claim 54, wherein said excipient or carrier is a saline solution.

64. (currently amended) The pharmaceutical composition of claim 54, wherein said compound is selected from the group consisting of:

2-Amino-4-(5-cyano-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-7-methyl-4-(6-methyl-pyrazin-2-yl)-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-7-methyl-4-(quinoxalin-2-yl)-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-ethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-cyclopropylmethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-(2-diethylamino-ethyl)-4*H*-pyrrolo[2,3-*h*]chromene;~~

2-Amino-4-(5-chloro-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(indol-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-chloro-6-hydroxy-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-bromo-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-methyl-4*H*-imidazo[4,5-*h*]chromene;

2-Amino-4-(5-bromo-pyridin-3-yl)-3-cyano-7-methyl-4*H*-imidazo[4,5-*h*]chromene;

2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl)-7-methyl-4*H*-imidazo[4,5-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4-hydroxy-5-methoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-oxiranylmethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-bromo-pyridin-3-yl)-3-cyano-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(4-acetoxy-3-bromo-5-methoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-8,9-dihydro-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4,5-trimethoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-nitrophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dimethoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4-methylenedioxo-5-methoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-methoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-bromophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-difluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(4,5-dimethoxy-3-iodophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-cyanophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4,5-trimethoxyphenyl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dimethoxyphenyl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-difluorophenyl)-8,9-dihydro-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-methyl-pyridin-3-yl)-3-cyano-7-methyl-8,9-dihydro-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-nitro-thiophene-2-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

4,7,10,13,16,19-Docosahexaenoic acid {2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-4*H*-pyrrolo[2,3-*h*]chromene}-7-ylmethyl ester;

4,7,10,13,16,19-Docosahexaenoic acid {2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl) -4*H*-pyrrolo[2,3-*h*]chromene}-7-ylmethyl ester;

2-Amino-3-cyano-4-(3-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(4-cyanophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-chlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dichlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4-dichlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-bromo-4,5-dimethoxyphenyl)-7,9-dimethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4-difluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-fluoro-4-chlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-bromo-4-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene; and

2-Amino-3-cyano-4-(3-cyano-4-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene; and

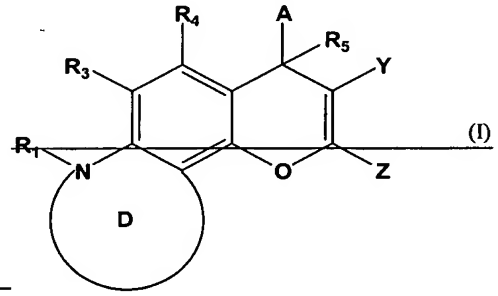
2-Amino-3-cyano-4-(5-methoxy-pyridin-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-3-cyano-4-(3,5-dichloro-phenyl)-7-isopropyl-4*H*-pyrrolo[2,3-*h*]chromene; and~~

~~2-Amino-3-cyano-4-(3-bromo-4,5-dimethoxy-phenyl)-7-isopropyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

or a pharmaceutically acceptable salt or prodrug thereof.

65. (withdrawn, currently amended) A method of treating a disorder responsive to the induction of apoptosis in an animal suffering therefrom, comprising administering to a mammal in need of such treatment an effective amount of a compound of claim 1 ~~Formula I:~~



~~wherein,~~

~~R_1 is selected from the group consisting of alkyl, cycloalkyl, cycloalkylalkyl, hydroxyalkyl, haloalkyl, alkoxyalkyl, aminoalkyl and oxiranylalkyl;~~

~~R_3 and R_4 are independently hydrogen, halo, haloalkyl, aryl, fused aryl, carbocyclic, a heterocyclic group, a heteroaryl group, C_{1-10} alkyl, alkenyl, alkynyl, arylalkyl, arylalkenyl, arylalkynyl, heteroarylalkyl, heteroarylalkenyl, heteroarylalkynyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, aminoalkyl, carboxyalkyl, nitro, amino,~~

~~cyano, acylamido, hydroxy, thiol, acyloxy, azido, alkoxy, carboxy, methylenedioxy, carbonylamido or alkylthiol;~~

~~R_5 is hydrogen or C_{1-10} alkyl;~~

~~A is optionally substituted and is aryl, heteroaryl, saturated carbocyclic, partially saturated carbocyclic, saturated heterocyclic, partially saturated heterocyclic or arylalkyl;~~

~~D is optionally substituted and is a heteroaromatic, partially saturated heterocyclic or saturated heterocyclic fused ring, wherein said fused ring has 5 or 6 ring atoms, wherein one or two of said ring atoms are nitrogen atoms and the others of said ring atoms are carbon atoms;~~

~~Y is CN, COR_{19}, CO_2R_{19} or $CONR_{20}R_{21}$, wherein R_{19}, R_{20} and R_{21} are independently hydrogen, C_{1-10} alkyl, haloalkyl, aryl, fused aryl, carbocyclic, a heterocyclic group, a heteroaryl group, alkenyl, alkynyl, arylalkyl, arylalkenyl, arylalkynyl, heteroarylalkyl, heteroarylalkenyl, heteroarylalkynyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl or aminoalkyl; or~~

~~R_{20} and R_{21} are taken together with the nitrogen to form a heterocycle; and~~

~~Z is $NR_{22}R_{23}$, $NHCOR_{22}N(COR_{23})_2$, $N(COR_{22})(COR_{23})$, $N{=}CHOR_{19}$ or $N{=}CHR_{19}$ wherein R_{22} and R_{23} are independently H, C_{1-4} alkyl or aryl, or R_{22} and R_{23} are combined together with the group attached to them to form a heterocycle;~~

or a pharmaceutically acceptable salt or prodrug thereof.

66.-67. (canceled)

68. (withdrawn) The method of claim 65, wherein each of R_3-R_5 is hydrogen.

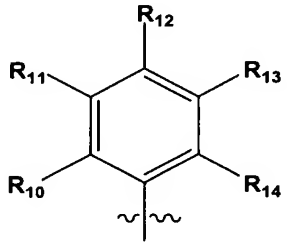
69. (withdrawn) The method of claim 65, wherein Y is cyano.

70. (withdrawn) The method of claim 65, wherein Z is $NR_{22}R_{23}$.

71. (withdrawn) The method of claim 70, wherein Z is NH_2.

72. (withdrawn) The method of claim 65, wherein A is optionally substituted and selected from the group consisting of phenyl, pyridinyl, pyrazinyl, quinoxalinyl, indolyl and thiophenyl.

73. (withdrawn) The method of claim 72, wherein A is

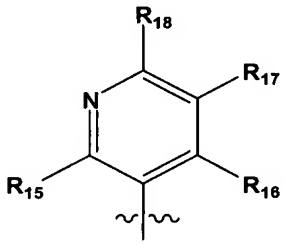


wherein,

R_{10}-R_{14} are independently hydrogen, halo, haloalkyl, aryl, fused aryl, carbocyclic, a heterocyclic group, a heteroaryl group, C_{1-10} alkyl, alkenyl, alkynyl, arylalkyl, arylalkenyl, arylalkynyl, heteroarylalkyl, heteroarylalkenyl, heteroarylalkynyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, aminoalkyl, carboxyalkyl, nitro, amino, cyano, acylamido, hydroxy, thiol, acyloxy, azido, alkoxy, carboxy, methylenedioxy, ethylenedioxy, carbonylamido or alkylthiol; or

R_{10} and R_{11}, or R_{11} and R_{12}, taken together with the atoms to which they are attached form an aryl, heteroaryl, partially saturated carbocyclic, saturated carbocyclic, partially saturated heterocyclic or saturated heterocyclic group, wherein said group is optionally substituted.

74. (withdrawn) The method of claim 72, wherein A is



and R_{15}-R_{18} are independently hydrogen, halo, haloalkyl, aryl, fused aryl, carbocyclic, a heterocyclic group, a heteroaryl group, C_{1-10} alkyl, alkenyl, alkynyl, arylalkyl, arylalkenyl, arylalkynyl, heteroarylalkyl, heteroarylalkenyl, heteroarylalkynyl, carbocycloalkyl, heterocycloalkyl, hydroxyalkyl, aminoalkyl, carboxyalkyl, nitro, amino, cyano, acylamido, hydroxy, thiol, acyloxy, azido, alkoxy, carboxy, methylenedioxy, ethylenedioxy, carbonylamido or alkylthiol; or
R_{16} and R_{17}, or R_{17} and R_{18}, taken together with the atoms to which they are attached form an aryl, heteroaryl, partially saturated carbocyclic, saturated carbocyclic, partially saturated heterocyclic or saturated heterocyclic, wherein said group is optionally substituted.

75.-78 (canceled)

79. (withdrawn, currently amended) The method of claim 65, wherein said compound is selected from the group consisting of:

2-Amino-4-(5-cyano-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-7-methyl-4-(6-methyl-pyrazin-2-yl)-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-7-methyl-4-(quinoxalin-2-yl)-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-ethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-cyclopropylmethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-(2-diethylamino-ethyl)-4*H*-pyrrolo[2,3-*h*]chromene;~~

2-Amino-4-(5-chloro-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(indol-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-chloro-6-hydroxy-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-bromo-pyridin-3-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-methyl-4*H*-imidazo[4,5-*h*]chromene;

2-Amino-4-(5-bromo-pyridin-3-yl)-3-cyano-7-methyl-4*H*-imidazo[4,5-*h*]chromene;

2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl)-7-methyl-4*H*-imidazo[4,5-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

Amino-4-(3-bromo-4-hydroxy-5-methoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-7-oxiranylmethyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-bromo-pyridin-3-yl)-3-cyano-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(4-acetoxy-3-bromo-5-methoxyphenyl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-8,9-dihydro-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4,5-trimethoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-nitrophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dimethoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4-methylenedioxo-5-methoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-methoxyphenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-bromophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-difluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(4,5-dimethoxy-3-iodophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amaino-3-cyano-4-(3-cyanophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4,5-trimethoxyphenyl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dimethoxyphenyl)-7-hydroxymethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-difluorophenyl)-8,9-dihydro-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-methyl-pyridin-3-yl)-3-cyano-7-methyl-8,9-dihydro-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-4-(5-nitro-thiophene-2-yl)-3-cyano-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

4,7,10,13,16,19-Docosahexaenoic acid {2-Amino-4-(3-bromo-4,5-dimethoxyphenyl)-3-cyano-4*H*-pyrrolo[2,3-*h*]chromene}-7-ylmethyl ester;

4,7,10,13,16,19-Docosahexaenoic acid {2-Amino-3-cyano-4-(5-methyl-pyridin-3-yl) -4*H*-pyrrolo[2,3-*h*]chromene}-7-ylmethyl ester;

2-Amino-3-cyano-4-(3-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(4-cyanophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-chlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,5-dichlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4-dichlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-bromo-4,5-dimethoxyphenyl)-7,9-dimethyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3,4-difluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-fluoro-4-chlorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-bromo-4-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

2-Amino-3-cyano-4-(3-cyano-4-fluorophenyl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene; and

2-Amino-3-cyano-4-(5-methoxy-pyridin-3-yl)-7-methyl-4*H*-pyrrolo[2,3-*h*]chromene;

~~2-Amino-3-cyano-4-(3,5-dichloro-phenyl)-7-isopropyl-4*H*-pyrrolo[2,3-*h*]chromene; and~~

~~2-Amino-3-cyano-4-(3-bromo-4,5-dimethoxy-phenyl)-7-isopropyl-4*H*-pyrrolo[2,3-*h*]chromene;~~

or a pharmaceutically acceptable salt or prodrug thereof.

80. (withdrawn) The method of claim 65, wherein said disorder is cancer.

81. (withdrawn) The method of claim 80, wherein said cancer is selected from the group consisting of Hodgkin's disease, non-Hodgkin's lymphoma, acute and chronic lymphocytic leukemias, multiple myeloma, neuroblastoma, breast carcinoma, ovarian carcinoma, lung carcinoma, Wilms' tumor, cervical carcinoma, testicular carcinoma, soft-tissue sarcoma, chronic lymphocytic leukemia, primary macroglobulinemia, bladder carcinoma, chronic granulocytic leukemia, primary brain carcinoma, malignant melanoma, small-cell lung carcinoma, stomach carcinoma, colon carcinoma, malignant pancreatic insulinoma, malignant carcinoid carcinoma, malignant melanoma, choriocarcinoma, mycosis fungoides, head and neck carcinoma, osteogenic sarcoma, pancreatic carcinoma, acute granulocytic leukemia, hairy cell leukemia, neuroblastoma, rhabdomyosarcoma, Kaposi's sarcoma, genitourinary carcinoma, thyroid carcinoma, esophageal carcinoma, malignant hypercalcemia, cervical hyperplasia, renal cell carcinoma, endometrial carcinoma, polycythemia vera, essential thrombocytosis, adrenal cortex carcinoma, skin cancer and prostatic carcinoma.

82. (withdrawn) The method of claim 81, wherein said cancer is a drug resistant cancer.

83. (withdrawn) The method of claim 80, additionally comprising administering at least one known cancer chemotherapeutic agent, or a pharmaceutically acceptable salt of said agent.

84. (withdrawn) The method of claim 83, wherein said known cancer therapeutic agent is selected from the group consisting of busulfan, cis-platin, mitomycin C, carboplatin, colchicine, vinblastine, paclitaxel, docetaxel, camptothecin, topotecan, doxorubicin, etoposide, 5-azacytidine, 5-fluorouracil, methotrexate, 5-fluoro-2'-deoxy-uridine, ara-C, hydroxyurea, thioguanine, melphalan, chlorambucil, cyclophosamide, ifosfamide, vincristine, mitoguazone, epirubicin, aclarubicin, bleomycin, mitoxantrone, elliptinium, fludarabine, octreotide, retinoic acid, tamoxifen, Herceptin®, Rituxan® and alanosine.

85. (withdrawn) The method of claim 80, additionally comprising treating with radiation-therapy.

86. (withdrawn) The method of claim 80, wherein said compound is administered after surgical treatment for cancer.

87. (withdrawn) The method of claim 65, wherein said disorder is an autoimmune disease.

88. (withdrawn) The method of claim 65, wherein said disorder is rheumatoid arthritis.

89. (withdrawn) The method of claim 65, wherein said disorder is inflammation.

90. (withdrawn) The method of claim 89, wherein said inflammation is inflammatory bowel disease.

91. (withdrawn) The method of claim 65, wherein said disorder is a skin disease.

92. (withdrawn) The method of claim 91, wherein said disorder is psoriasis.

93. (new) The compound of claim 1, wherein R_1 is methyl.

94. (new) The compound of claim 1, wherein R_1 is hydroxymethyl.

95. (new) The composition of claim 54, wherein R_1 is methyl.

96. (new) The composition of claim 54, wherein R_1 is hydroxymethyl.

97. (new) The method of claim 65, wherein R_1 is methyl.

98. (new) The method of claim 65, wherein R_1 is hydroxymethyl.

99. (new) The compound of claim 1, wherein said ester of said hydroxymethyl is obtained by condensation of the hydroxymethyl group with a C_{1-40} carboxylic acid or with a C_{3-6} dioic acid or anhydride thereof.

100. (new) The composition of claim 54, wherein said ester of said hydroxymethyl is obtained by condensation of the hydroxymethyl group with a C_{1-40} carboxylic acid or with a C_{3-6} dioic acid or anhydride thereof.

101. (new) The method of claim 65, wherein said ester of said hydroxymethyl is obtained by condensation of the hydroxymethyl group with a C_{1-40} carboxylic acid or with a C_{3-6} dioic acid or anhydride thereof.